



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

- ART. V. — 1. *The British and Foreign Medical Review*. Vols. XXI. and XXII. 1846.
2. *Nature and Disease, illustrated in various Discourses and Essays. To which are added Miscellaneous Writings, chiefly on Medical Subjects.* By JACOB BIGELOW, M. D., Physician and Lecturer on Clinical Medicine in the Massachusetts General Hospital, Professor of Materia Medica in Harvard University, President of the American Academy of Arts and Sciences, &c., &c. Boston. 1854. Second Edition, enlarged. 1859.
3. *Of Nature and Art in the Cure of Disease.* By SIR JOHN FORBES, M. D., D. C. L. (Oxon.), F. R. S., Fellow of the Royal College of Physicians, Physician to the Queen's Household, etc., etc. London. 1857.
4. *Rational Therapeutics: a Prize Essay.* By WORTHINGTON HOOKER, M. D. Publications of the Massachusetts Medical Society. Vol. I. No. II. Boston. 1857.
5. *Brief Expositions of Rational Medicine: to which is prefixed, The Paradise of Doctors, a Fable.* By JACOB BIGELOW, M. D. Boston. 1858.

“Nous avons changé tout cela, et nous faisons maintenant la médecine d'une méthode toute nouvelle.” Thus replies the *Médecin Malgré Lui* to the objection, that he has located the heart upon the right, and the liver upon the left side of the body of his patient. Scarcely more reasonable to the world at large seem the explanations of many of the changes in modern medicine. The bitter satire of Molière on the faculty, which may be traced through most of his comedies, though particularly prominent in *L'Amour Médecin*, *Le Malade Imaginaire*, and the play above quoted, while it follows the coarser wit of the clyster-school of Rabelais, and the Sangrado theories of Le Sage and Cervantes, unfortunately still possesses enough of verisimilitude to render it readily recognized and relished by the non-professional reader of to-day. For though the bold heroism of the older schools, who, two centuries ago, reposed most confidence in the simple *ordonnance*, “saigner et faire boire de l'eau chaude,” which consti-

tuted the medical knowledge, principle, and practice of Gil Blas's preceptor, has yielded to a mild and sometimes weak expectancy, enough of wavering judgment, uncertain results, and contradictory theories remains to render the weakness of the medical art apparent to any one, in the course of the ordinary vicissitudes of life.

Medicine can never be an exact science, since it deals with the vital principle,—a principle in itself changeable, self-supporting, and self-regulating. Vital force, though a convenient refuge for the idle theorist, is the great perturbative element which renders the results attained by the faithful student of nature approximate rather than precise. The calm test of experiment and the pure logic of analysis in organic chemistry are rendered uncertain, through an imperfect knowledge of its laws. Chemical processes, which duly carried out under similar circumstances give always the same result in the laboratory, are often wholly and inexplicably changed in the living organism. Pharmaceutical combinations, whose just proportionment and harmonious qualities afford to the prescriber flattering promise of the best effects, may be altered to irritants, and even poisons, by the action of the animal fluids, to which they must be subjected for absorption into the human system. Hence, unlike the practical arts based on the exact sciences, where, as in mechanics, we can rely upon certain definite and unchangeable results from the application of certain positive laws, the art of medicine does not respond unerringly to the discoveries in medical science. And therefore we find, that, although anatomy and physiology, both natural and morbid, have made such immense progress, yet therapeutics is still far behind them; that the power of healing is much inferior to the capacity of knowing; the treatment, to the diagnosis of the disease.

That instinct of self-preservation, not only from bodily danger, but also from physical suffering, which is a common attribute of our humanity, must have rendered some knowledge of the care of the sick coeval with the earliest adult generation of men. The nurse was born with Eve; the art of medicine sprang from the first experiences of life. Whoever foresaw empirically the hurtful consequences of certain acts,

and advised their avoidance, exercised the noblest—the preventive—branch of medicine. Whoever relieved empirically the consequences of the committed act, was the first curer or healer.

Yet we do not find the history of medicine as old as the art, for the most ancient records which we possess are those of the school at Cos, but a few centuries before the Christian era. There were but two sources to which medicine could be reasonably traced. The majority of the ancients gratefully ascribed it to the gods; but the philosophic mind of Pliny, and other observers of nature, referred much of the medical knowledge of their day to the instructive teachings of dumb animals. Thus the wild goats of Crete showed the use of vulneraries; dogs, when indisposed, sought the *Triticum repens*, and so introduced that pleasing demulcent to man; cattle with the dropsy anxiously looked for chalybeate waters; and the hippopotamus (*mirabile dictu!*) performed self-venesection to relieve his plethora. However begotten or born, the “divine art” had grown to very respectable proportions in the time of Hippocrates. The doctors were already numerous, and the profession very lucrative. Some class its progress with that in architecture and sculpture; and we may reasonably conclude that it reached an advancement in and through Hippocrates, which, in certain departments, succeeding centuries have hardly yet surpassed. That greatest of physicians originated the expectant theory of treatment; taught the uses of regiminal means; uttered aphorisms, which are still familiar in our mouths, and prescribed an oath to the medical graduate, which is even now administered in some universities, and whose obligations, if they could be made legally binding upon all sorts of practitioners, would remove one of the blackest and most wide-spread crimes of our land.* The exuma-

* The following are the chief provisions of the Hippocratic oath: “I swear by Apollo, the physician, by Æsculapius, by Hygeia, and Panacea, and all the gods and goddesses, that I will prescribe such a course of regimen as may be best suited to the condition of my patient. No inducement shall ever lead me to administer poison, nor will I ever be the author of such advice; neither will I contribute to an abortion. I will maintain religiously the purity and integrity both of my conduct and of my art. If during my attendance I happen to see or hear of any circumstances which should not be revealed, I will consider them a profound secret. May I prosper [or the reverse] as I keep this obligation.”

tions at Pompeii show surgery to have been equally perfected with many other arts among the ancients, and reveal instruments the prototypes, in some instances entirely unchanged, of those which have made the professional fortunes of their modern inventors. The therapeutics of the school of Cos have no reason to blush beside those of London ; while they are hardly distinguishable from some of the expectant methods now pursued in Germany and Paris.

Yet such is the perverseness of man, or rather such the seemingly crab-like progression in all search for truth, that the voice of the great medical philosopher had hardly ceased to be heard by his pupils, ere the influence of his teachings began to wane. New and more perturbative theories supplanted his gentle laws, and “heroic medicine” began to curse the human race. Five centuries sufficed for the birth, active influence, and decay of an equal number of medical sects, — the Dogmatici, Empirici, Methodici, Pneumatici, and Eclectici. The names alone of two of these remain. Empirics and eclectics are appellations now confined to irregular practitioners ; though all medical art is yet to some extent empirical, and every honest physician should be an eclectic, in the proper acceptation of the word. The leeches of the Middle Age, with their simples and charms, used probably more harmless modes of medication, and were not sufficiently bold theorists to attract public attention. Later, the Humorists and Solidists divided the medical world. The pharmacy of two centuries ago was fearful to contemplate. The value of a prescription was measured by its length. The noted *Antidotum Mithridatum*, a popular medicine, contained no less than seventy-two ingredients. The active principle was opium ; and the other substances varied from simple bitters, astringents, and aromatics, to such disgusting, if harmless, preparations as the flesh of vipers. And it was hence well named *Electuarium opiatum polypharmacum*. The pharmacopœia was filled with the most singular remedies ; but we recollect none which equalled in unpalatableness one advocated in England by “the apostle of Homœopathy,” an infusion of the *pediculus capitis*, — we presume the domestic variety.

In spite of the influence of such minds and discoveries as those of Harvey, Jenner, Hunter, and Bichât, therapeutics continued a prey to the most violent internecine feuds. Treatment oscillated between such extremes as the antimonial course of Rasori, and the bleeding *coup sur coup* of Bouillaud. Etiology, in the hands of the most opposite characters, was content to trace all maladies to a single cause; which *materies morbi* Broussais located in the alimentary canal, but Hahne-mann upon the skin. A tendency to return to the neglected rules of Hippocrates was fostered by Sydenham, Stahl, Boerhaave, and his pupil Van Swieten. Stahl wrote a work on the expectant method of treatment, and Sydenham followed its dictates, with those of common sense, in practice. Cullen, on the other hand, though he purged the pharmacopœia of many useless combinations, and deserves the merit of giving to certain valuable drugs their due prominence, denounced the mild resources of the expectant method, and advocated active medication. In this course he was followed farthest by the celebrated Dr. Rush in this country, who reposed so much faith in drugs, that he is reported to have said in the lecture-room, "As to nature, I would treat it in the sick-chamber as I would a squalling cat, — open the door, and drive it out."

These fluctuating theories are much to be regretted, not only as having lowered the profession in the public esteem, but still more for their confusing effect upon physicians themselves. For though the science of the nineteenth century has thrown a flood of light upon our path, in anatomy, physiology, chemistry, and pathology, it cannot be denied that much uncertainty still remains. Two chief sources of doubt and distrust annoy the medical student and the young practitioner. He cannot help vacillating among the opposite doctrines which he hears even now expounded; and he discovers very soon in his practice the superiority of medical science to medical art. He probably heard, while an undergraduate, that, if the study of medicine was delightful, its practice was the reverse. The petty annoyances attendant on any pursuit in life, and the tedium of the long probation of "expectancy," which he must endure before he gains the public attention and confidence, are evils which the buoyancy of youth and the

examples of the past enable him to bear with fortitude, if not with patience. But when he finds that years of preparation, and the conscientious pursuit of every collateral science which could illustrate his main subject, have brought him to the conviction that all his knowledge will often fail to cure the diseases which he has investigated so long, it is not surprising that he should faint with weariness, and totter in doubt as to the worth of all he has acquired. A perusal of the volumes the titles of which we have placed at the head of this article, in this frame of mind, may strengthen the appalling conclusion that his work has been indeed in vain. They will teach him a bitter, but a very wholesome lesson. At any price, we demand the truth. Let us see if we cannot derive from them grounds for encouragement, rather than despondency.

“What more melancholy fact,” says a correspondent of Sir John Forbes, writing from Germany, “can be presented to the mere prescriber when he first enters upon the duties of his benevolent profession, with the enthusiasm of unsoured philanthropy, than the continual assurance of the Nestors of the profession, that the greater our experience, the more positive the conviction that we can *do* nothing? But, sir, thanks to you, and to men like Combe, Chadwick, Clark, the young generation see the radiancy of a new light, that warms the heart while it illumines the intellect; and though their path still continues beset with dangers, they feel a firm footing, and the slough of despond is passed.”

The thoughts that strike us most, after the first feeling of surprise is over on examining the titles and contents of these books, are their philosophic spirit, their modesty, and the probability of their truth. They are all written by old practitioners; men who, if their past lives did not give ample testimony to their honor, could have nothing to gain by their publication. Their reputation is made, their position established, and they have no theories to maintain. They must be sincere to venture so rude a shock on professional and popular prejudices; they must know the truth of what they assert by long experience. The quiet simplicity of their style is the very opposite of exaggeration, or loose assertion. They are well aware of the opposition they must encounter from conventionalism, — and of this Sir John Forbes speaks: —

"In medicine, the great majority of practitioners retain the same doctrines and pursue the same practice which they learned in the schools; or, if changing both doctrine and practice, as time and fashion dictate, hold fast, at least, the great fundamental doctrine, impressed upon the very core of their professional heart, namely, that the interference of Art is essential in all cases, and therefore never to be foregone." — p. 164.

His modesty and the object of the work are both well expressed in an extract from Elias Camerarius, on the title-page: "Quibusdam saltem profutura Tironibus; . . . hos docere, his scribere, animus erat, non Eruditis non Doctoribus: quî enim tam sim vanus, ut erudire eruditos ipse minime eruditus præsument?"

The same idea is again presented, as follows: —

"Having been now actively engaged in the practice of medicine for the long period of fifty years, and having derived therefrom much of the prosperity and happiness that have been my fortunate lot in life, I feel that my profession has claims on me for much more than I have hitherto been able to give it; and as, at my time of life, and in my present state of health, I have no right to look forward to the acquisition of further knowledge in the same field, it is incumbent on me to communicate now any information I may possess, if I am to communicate it at all. In doing so, I cannot help being impressed with the feeling of solemnity which naturally accompanies any act that is to be the last of its kind. And in this mood, I would fain regard the present work in the light of *A Legacy to my Younger Brethren*." — p. 3.

In this article we propose to follow the same order of subjects with Dr. Forbes, simply because his work is the most extended of those named as the text for our comments. But we wish to solicit attention to the fact, of which we should be proud, that it was here, in Boston, that the profession was first recalled from the study of the perturbative theories of the preceding fifty years to the natural history of disease, and to the old Hippocratic dogma that Nature deserves the credit of a large share of all cures. As early as 1835, Dr. Jacob Bigelow read an Essay on Self-Limited Diseases before the Massachusetts Medical Society. It expounded nearly the whole subject; and its quiet and well-chosen arguments and examples carried conviction of its truth. Dr. Forbes's first startling

article on "Homœopathy, Allopathy, and 'Young Physic,'" in which the autocracy of Nature was broached by him, was not published until 1846. His later and more elaborate work on "Nature and Art in the Cure of Disease" did not appear till 1857; while in 1854 Dr. Bigelow published his "Nature in Disease," which was followed by his "Brief Expositions of Rational Medicine," in 1858.

While pursuing, as nearly as may be convenient, the order of subjects of the author of "Nature and Art in the Cure of Disease," it is obvious that we can find space only for those portions of the other works which have a direct bearing upon this matter. We must therefore reluctantly pass over many parts of Dr. Hooker's Prize Essay on Rational Therapeutics, — though from it we shall derive some Golden Rules, — and the papers of Dr. Bigelow on miscellaneous subjects, as well as his kindly satire of "The Paradise of Doctors," devoting our attention mainly to his Essays on "Self-Limited Diseases," and "The Treatment of Disease," and his views on "Rational Medicine."

Among the errors inseparable from all subjects which are incapable of demonstration, and which must be settled by finite reasoning and opinion, are the different impressions which the same set of phenomena will make on different individuals. Thus is to be explained the fact, that no two men ever get precisely the same ideas of a given case of disease, either as to diagnosis or treatment. So too the influence of temperament and age, quite as much as that of experience, affects the practice of the physician.

"The conviction of the great autocracy of Nature in the cure of diseases, derived from this source [that of personal experience], is much more widely spread among the senior members of the profession, than is at all believed by the great body of practitioners. It is this conviction influencing their proceedings, that so often makes the practice of these men obnoxious to the charge of inertness from their younger brethren. They are accused of being as inactive as 'old women,' and are indeed accounted as such by the whole band of heroes fresh from the schools, as well as by those of maturer age, whom experience has never taught to doubt respecting the conventionalisms of their early training. It is as an old member of this inert

fraternity, and as the expositor of doctrines sanctioned by their opinions and practice, that I have ventured to take upon myself my present task; and I feel assured that, if I were allowed to adduce the many eminent names who join with me in opinion, whether from the ranks of living or dead physicians, the doctrines I venture to promulgate would meet with much readier acceptance from the profession and the public, than they are likely to do under the authority of any individual."—*Forbes*, p. 166.

Sir John Forbes's work may be pretty evenly divided into two distinct parts. The first treats of the Natural History of Disease, and the powers of Nature in its cure; the second discusses the true nature and powers of the Medical Art.

The first two chapters are mainly introductory; giving the author's reasons for writing this work, and treating of the prevailing ignorance respecting the power of Nature to cure disease. The constant changes in medical theories we are to regard as the indication of a lively zeal among physicians to improve their art; and this again must arise from their consciousness of its imperfections. We are told that an ignorance of the *Natural History of Diseases* is the most fruitful source of false views both in pathology and practice; and that in the knowledge of the natural course and issue of diseases much less progress has been made, than in their morbid anatomy. One reason for this is that diseases are largely interfered with and modified by art; and another, that they *seem* to be thus modified to a still greater degree. The author aims also to convince the public generally, who are even more prejudiced than the profession, that Nature has a conservative power; and to set just bounds to their appreciation of the powers of the medical art. For this ignorance of the public reacts injuriously upon the profession, interfering with their judgment, modifying their treatment, and often forcing them to make use of active measures, which might better have been left alone. This ignorance, too, engenders a lack of confidence in mild though judicious practitioners, and leads the public to employ heroic dosers, to trust in the idle promises of charlatans, and to run after the professors of Mesmerism, Spiritualism, and other useless delusions. Dr. Forbes is desirous that the reader should start with the understanding,

that the great object of his work is to establish the fact, that Nature possesses vastly greater powers than Art in curing diseases. Though it is not meant that the matter in question should be prejudged unfairly, it is also necessary that the reader should be aware, that the derogation of Art is the particular result of the second part of this volume.

It is not perhaps surprising that the public, after witnessing the severity of acute disease gradually give way to convalescence, contemporaneously with the employment of palpable and violent remedial measures, should fall into the error, still so common among the faculty, of mistaking sequences for consequences, nor even that, in lingering chronic maladies, they should laud an art which could so long hold its ground against so obstinate an affection. Even when the disease proves fatal, it is not doubted that life has been prolonged and suffering mitigated by the same measures. Or if they lose confidence, it is not in the powers of the medical art, but in the knowledge of its professor; it is not that the means failed, but that the doctor lacked ability to apply those means aright. Since, as we confidently believe, no body of men possess more justly the public esteem, as conscientious, honorable, and laboring members of the community, than the regular physicians, so it is rarely, except from the lowest and most degraded classes of society, that we hear improper motives imputed to them. It is from such only that we expect that unworthy argument, which we have seen applied by the poor to our great charitable hospitals, and which is as old as the time of Pliny: "*Discut periculis nostris et per experimenta mortes agunt.*"

If we are not surprised, all things considered, that extreme ignorance of the comparative powers of Nature and Art in curing disease should prevail among the public at large, how shall we explain its existence to such an extent among the faculty? A true estimate of the powers of Nature is interfered with through the officiousness of Art. Were diseases left to themselves, the subject would not be too complex for elucidation by any observer with good common sense. The finding a proper field for such observation is by no means so easy as it might at first appear. In no form of medical practice are the agencies termed *Regiminal* altogether absent.

These are comparatively unimportant disturbing causes. But nine tenths of all diseases are subjected to active treatment, which must at once vitiate the result. The difficulties in the way of the young practitioner in obtaining an accurate knowledge of the power of Art in curing disease are somewhat different in kind, but vastly greater in degree. The grand fundamental obstacle arises from the ignorance of the natural history of diseases, and this is fostered by there being no distinct chair for instruction in this subject in medical schools, and no open field for it in hospitals and dispensaries. The practitioner's own conscientious scruples against leaving any cases to the unassisted care of Nature, from the fear, magnified by his previous teaching, that he might be injuring his patients, the non-perception of the utility of the knowledge to be so acquired, and the dread of being exposed to the charge of malpractice, all operate against his chances of acquiring such knowledge. Since the great increase of charitable medical institutions, it is not easy to meet with cases, even among the poorest classes, entirely left to Nature. We must also take into consideration the inability of practitioners, from prejudices of education, to see the results of the spontaneous operations of Nature, in such cases as they treat themselves. It is a very common error of theirs to attribute solely to drugs results which really flow from other concomitant influences, as rest, diet, air, season, faith in the medical adviser, or change of scene. The great variations in common sporadic diseases, or in prevalent epidemics, at different periods of the year, or in different years, is another source of error so commonly disregarded, that we are apt to sneer at such treatment of diseases in former times as the influences of those periods may have rendered the most judicious. Idiosyncrasy, or the modifying influence of individual constitution or temperament, gives other grounds of doubt. Again, since medicine is not an exact science, but all conclusions respecting it must be reached through the balance of probability, the attainment of truth is here met by the same difficulty as in all the other non-demonstrable branches of knowledge. What wonder, then, that the comparative powers of Nature and Art should be undecided, when the respective influence of either

is so difficult to appreciate? Dr. Forbes has placed them in a clearer light by the following happy comparisons:—

“However favorably we may look on remedies, and although we may admit their validity in many cases, they can at most be regarded, in relation to the case of most diseases, only as the voice, hand, whip, or spur of the rider are to the progression and course of the horse: they may stimulate or excite the natural faculties to do the work which they themselves have no power to do; they may possibly, also, regulate or direct the course of action of the natural faculties (as the rider guides his horse) so as to force them to a speedier or even to a different issue; but the essential agency in both cases is exclusively in the individual organism, not in the extraneous spur,—the muscles of the horse in the one, the *vis medicatrix* in the other. It must be obvious, therefore, that to overlook this inherent curative power, in any attempt to estimate the value of Art in curing diseases, would be to overlook, to say the least of it, a most important agent. As a rower in a boat on a river, who, in estimating the cause of progress between its banks, should make no allowance for the motive force of the current, but attribute the whole of his advance to his own exertions at the oar.” pp. 35—37.

A most important element in the natural history of disease is the exact proportional mortality of diseases generally, when left to their natural course. This is the sole kind of knowledge which could enable the physician to speak with certainty as to the power of the medical art to cure diseases that would otherwise prove fatal, or the amount of this power if it exists. The author believes that this knowledge will finally be accumulated and tabulated on a grand scale, as the tendencies of the medical art shall indicate, and its necessities require. Dr. Laycock, in the *British and Foreign Medical Review*, judiciously suggests that such a natural history would require a system of observation, and a system of classification; the first based on physiology, the second on structure rather than on function.

Chapters III., IV., and V. treat respectively of Diseases; their Causes and Nature; and their Course and Progress. Of the contents of the third chapter we shall say no more, than that it defines Health and Disease; describes the aggregation of certain bundles of phenomena, or symptoms, into distinct

diseases, of which the divisions and the nosologies are necessarily somewhat arbitrary; distinguishes, as distinctly as can be reasonably done, the differences between structural and functional diseases, and refers to the old lines, often overstepped on either side, of acute and chronic maladies. The author makes the important remark, that the latter have no distinct course,—inception, continuance, and end,—and that they are very difficult of classification.

We may find in the fourth chapter, on the Causes, Mode of Production, and Nature of Diseases, much worthy of contemplation. Disease is a variation from health; its theatre of action, the human frame. It is not probable that the ordinary exposures, changes, and varieties of any form of social life can be at all times consistent with perfect, unbroken health. They who ascribe to certain fabulous and primitive states of existence the attribute of eternal youth and freedom from sickness, are led away by a too discursive imagination. For even if we cultivate the physical at the expense of the mental faculties, and are successful in avoiding the bruising teeth of care and want, we are none the less exposed to miasmata and contagion, and we are assured that it is appointed to all men once to die. The most expert physician succumbs at last to one of the very diseases he has been investigating; and, confident to cure, Laennec and Corvisart fell victims to those affections of the chest which they had peculiarly illustrated by their discoveries. “Heal thyself” is, and will always remain, a truthful satire on human knowledge.

“In a machine so marvellously complex as the living animal body, consisting of such an infinity of parts of extreme delicacy, all more or less depending on one another, and performing such a multitude of operations of the most elaborate and refined nature, it would seem but reasonable to expect that it should sometimes vary from its normal or perfect state, through some alteration in its material structure or some deviation from the regularity or harmony of its course; and this expectation must be greatly strengthened, when it is further considered that all this machinery, composed of the frailest and least durable materials, is self-created, self-sustained, self-acting, every instant varying and changing in the intimate composition of its parts, and, above all, constantly dependent on conditions and influences external and

entirely foreign to itself, and which are in themselves perpetually varying. The marvel indeed is, — and truly it is one of the greatest of marvels, — that, under such circumstances, a state of harmonious or perfect action (in other words, a state of health) should not be rather the exception than the rule.” — *Forbes*, pp. 66, 67.

Diseases may be congenital, hereditary, the result of a naturally feeble constitution, or, as in the vast majority of instances, produced by external causes. These causes may be simple and single; more frequently they are numerous and combined. Among the most evident are those inducing constitutional feebleness, as insufficient nourishment and exercise, impure air, and want of sleep; atmospheric influences, as cold, heat, and moisture; errors of diet; mental causes of every variety; mechanical and chemical agencies; poisons, whether mineral, as that of lead, animal, as that of a dissecting wound, vegetable, as miasmata, producing very various affections, or morbid, so called, as that of small-pox or scarlatina; also the poisons of animal secretions, as hydrophobia, and ova, producing parasitic diseases; what are called functional variations, as over-action; and finally, traumatic lesions. The precise manner in which these causes operate to produce particular diseases is in a few cases known; in a larger proportion, partially known; in the majority, unknown. A most important distinction is now to be made. We must try to shake off certain old but false ideas of disease, which have long rested like an incubus on the theory-ridden shoulders of the medical world.

Few articles in the physician's creed have given rise to so many blunders in treatment, as that which supposes diseases to be something distinct from ourselves and the processes of our lives; which assigns to them a separate existence, and regards them as real, extraneous entities, to be attacked, conquered, and expelled. Dr. Forbes can best explain his own views: —

“What we term causes of diseases are not real or efficient causes, or indeed, properly speaking, causes at all; they merely constitute, as it were, the *occasions*, on the existence or presence of which, or, so to speak, on the *prompting* of which, the natural or vital functions of the living body set about forming the diseases themselves, and do form

them. In this point of view, then, it is obvious that what we term diseases are not things different from, and extraneous to, the living body, but rather particular conditions of this ; new phases, as it were, of its vital manifestations. They are essentially vital, that is, processes of a living organism, whether they come under the head of dynamic or functional, or of material or structural conditions, or states. All morbid action is but a modification or perversion of some natural or normal action or function ; and all the physical results constituting morbid structural alterations are mere perversions or modifications of natural or normal textures, or, at most, analogous textures fabricated from the same materials by like processes. Neither is disease, as others believe, a distinct *imperium in imperio*, independent of, and setting at defiance, the legitimate laws of the organism in which it is developed, and acting in accordance with laws of its own. It is rather, if we may carry on this analogy, like a constitutional Opposition in a free government, organized in accordance with the existing laws, and still submitting — reluctantly, it may be — to their sway. Attention to this fact is the more important, because it constitutes one of the strongest *à priori* grounds for admitting the reasonableness and probability of the natural cure of diseases, hereafter to be shown as a matter of fact. If Nature, without any extraneous aid, either dynamical or material, can build up diseases, there would seem no substantial reason why she should not be equally able to effect their removal.” — pp. 75 – 78.

These opinions are well illustrated by examples derived from all the larger classes of diseases. Nervous affections are but variations in the natural actions of the affected organs ; the redness, pain, heat, and swelling of inflammation are only an exaltation of the normal processes of circulation and nervous influence ; the phenomena of fever are mere modifications of the regular vital actions, though the cause of these modifications may be a poison from without ; hemorrhages and dropsies consist simply in a perversion of the common functions of secretion, excretion, and absorption ; morbid deposits and extraneous growths are varieties of healthy, or examples of perverted nutrition ; and so with the rest.

Having shown disease in its nature to be only a changed mode of vital action, Dr. Forbes next undertakes to demonstrate, in Chapter V., on the “Course or Progress of Diseases,” that it has a natural rise, increase, intermittence, climax, de-

cline, and limit. Having been already told, that, "Although thus neither individual entities superadded to the body, nor yet perfectly novel and original conditions of the structures or functions of the body, but merely alterations, modifications, or perversions of the conditions existing in the state of health, diseases may and do have special laws of their own, governing the manifestations of their general phenomena and course,"—we are now the better prepared to admit, not only that the elements of disease must necessarily participate in the same natural variations as the processes of health, but that every disease has a course or progress peculiar to itself. This course may commence mildly or violently, may increase slowly or with rapidity, but in either case reaches a certain acme, and then either extinguishes life or declines. While we may allow, then, that accidental complications, or the interference of Art, may often interrupt and even change its natural course, it would seem probable from theory, and is proved by experience, that many diseases are essentially *self-limited*. This is the great truth which Dr. Bigelow first unfolded to the profession twenty-four years ago.

"By a self-limited disease, I would be understood to express one which receives limits from its own nature, and not from foreign influences; one which, after it has obtained foothold in the system, cannot, in the present state of our knowledge, be eradicated or abridged by Art, — but to which there is due a certain succession of processes, to be completed in a certain time; which time and processes may vary with the constitution and condition of the patient, and may tend to death, or to recovery, but are not known to be shortened or greatly changed by medical treatment." — *Nature in Disease*, p. 4.

Such terms as "a settled disease," and "the run of a disease," imply the existence of a belief in this theory among the public. We are told by the same authority, that, although it is difficult to select a perfectly satisfactory or convincing example of a self-limited disease from among the graver morbid affections, on account of the universal employment of remedies, yet we can find abundant instances among the milder maladies, — as the vaccine disease, or the chicken-pox. It is not easy to say why one disease has necessary limits, while another is without them. Sometimes the law

of the disease may be traced to the nature of the exciting cause. Thus the morbid poison of measles or of small-pox produces a self-limited disease, while that of syphilis does not. Simple, paroxysmal, and metastatic diseases represent three classes which are self-limited; and of these, whooping-cough, epilepsy, and acute rheumatism are respectively typical instances. In investigating this subject, we may reasonably suspect those diseases to be self-limited, from which those who make use of no treatment, and those who submit to empirical or nugatory modes of medication, equally recover; those for which the most opposite modes of treatment are recommended; and those of which enlightened physicians themselves die. Besides erysipelas and most of the eruptive and continued fevers, many other diseases are now regarded as self-limited which were not included in that class when Dr. Bigelow's essay was written. We think that this matter is placed in a still more simple and clear light in the "Expositions of Rational Medicine," by the same author.

"Medical assumption may well feel humbled by the most insignificant diseases of the human body. Take, for example, a common furunculus or boil. No physician can, by any internal treatment, produce it where it does not exist. No physician can, by any science, explain it, and say why it came on one limb and not upon another. No physician can, by any art, cure it after it has arrived at a certain height. No physician can, by any art, delay or retain it after it has passed the climax assigned to it by nature. And what is true in regard to a boil is equally true of common pneumonia, of typhoid fever, of acute rheumatism, of cholera, and many other diseases."

There follows the sad corollary, that certain diseases, of which the number is not very great, are curable by medicinal means; that certain others, more numerous, are curable by regiminal means; that another class of diseases are self-limited; and, finally, that a large class are incurable. In an introductory lecture before the medical class of 1852, on "The Treatment of Disease," the author just quoted, in view of these facts, says, that if he were asked what makes a great physician, he would answer, "*He is a great physician who, above other men, understands diagnosis.*" In the same vein, the venerated Dr. Elisha Bartlett, in his "Philosophy of Medi-

cine," says: "Diagnosis will be in advance of therapeutics; and this for two reasons. In the first place, the elements of the former are fewer, and less complex in their relationships, than those of the latter; and in the second place, diagnosis is an *essential prerequisite* of therapeutics."

To return to the main subject. After tracing the nature of diseases, and proving them to be a part of the common actions of the human system,—demonstrating that they have a regular course or progress, and are, many of them, self-limited,—the next great step is to look at their natural terminations, and to show that they sometimes end in health, and are not all essentially destructive. This brings us to Chapter VI. of Dr. Forbes's work.

When we look at the great scheme of Providence for peopleing the world with living beings, it is obvious that some means must be adopted to remove the surplus population, and that in all finite existence there must be deaths as well as births. How often death succeeds disease, we are all but too well aware. Old age, accident, and disease are the three fatal means employed by Nature to terminate human life. Fewer deaths occur in age from natural decay than from formal disease; the fatal accidents which happen to mankind are not very numerous in the aggregate; and we therefore have a large balance of mortality to be settled by disease. We should naturally expect, therefore, that in a great proportion of cases sickness would terminate in death. And yet we have, in partial opposition to this assumption, the fact of the essential conservatism of organic existence throughout nature, as shown in the many ills which, though threatening, are eventually recovered from. It is much easier to prove that Nature causes death, than that she also causes health to ensue as a normal and not infrequent consequence of disease.

Still no one will doubt the curative tendencies and powers of Nature in certain organic and structural diseases; as in absorbing dropsical effusions, removing the extravasated products of inflammation, or plugging a bleeding vessel. Yet, on the other hand, it is certainly no less apparent, that, in other cases, the ultimate result is the very reverse of curative. Thus, the morbid influence of acute rheumatism may stiffen,

with bead-like excrescences, the pliable valves of the heart,—the very gates of life. Nature endeavors to compensate for the increasing difficulty of driving the blood through the narrowed orifices, by adding to the muscular power of the propelling organ. But the result is hypertrophy of the heart, with all its attendant evils. Although, therefore, all must admit that many sicknesses end in recovery, compared with the smaller number that terminate in death, yet Nature is not always kind. This is well expressed by a correspondent of Dr. Forbes, in the British and Foreign Medical Review.

“The existence of such forces in nature as a *vis vitiatrix* and *vis necatrix*, as well as a *vis medicatrix*, is apt to be forgotten by physicians, who, from the influence of the old Hippocratic doctrines, got into the habit of representing Nature as all beneficent,—as if she had no poisons, generated no diseases, and allowed nobody to die if she could help it. Much of the practice in the ordinary system of medicine is a strict imitation of salutary processes in nature, and its object is to make such processes supersede the *baneful practice* of Nature, who, though she knits up wounds with her adhesive inflammation, by the very same method glues the intestines into fatal entanglements, shackles the heart, and chokes up the windpipe.” — Vol. XXII. pp. 558, 559.

Enough evidence can be easily adduced, however, to show the power of Nature to remove the causes of disease, and even the exact manner in which she proceeds to effect her object. Of this, the expulsion of noxious solids or fluids by vomiting or purging, the resistance to the entrance of poisonous gases into the lungs by coughing, and the washing away of foreign bodies from the eyes or nostrils by increased secretion, are familiar instances. We only wish to consider fairly both sides of the question, and to show that the natural efforts *sometimes* fail, or are misdirected. No one doubts that the febrile movement of scarlet-fever is the rebellion of Nature against the deadly influence of the poison of that disease. Yet, though often sanative, and even curative, this reaction may be so excessive as to lead to death, *per se*. Vomiting a poison may be requisite to continued life, but may end in the rupture of a vessel in the brain, or in fatal intestinal hernia. If we have often recognized and admired the curative influence of Nature in mild diseases, we have also often seen the beneficial aid of

very simple measures in other cases. It more than once happened to us, while attached to a large charity hospital, to witness the marvellous change produced in some squalid, chilled, and delirious wretch, taken from the lowest depths of poverty and vice, by a warm bath, a quiet bed, rest, and soothing though nutritious food.

If, by this slight sketch of both sides of the question, we have now reached a sufficiently impartial position for deciding as to the natural termination of diseases in health or in death, we shall be prepared to form a just appreciation of the general evidence in favor of the curability of diseases by Nature, which Dr. Forbes adduces and displays at length in his seventh chapter.

He endeavors to derive his evidence from the purest sources; that is to say, from those cases least interfered with by art. He speaks first of the great field presented by the pathology of the inferior animals. Wounds of the most desperate character heal in wild beasts; murrains and other epidemics spare many of those attacked among the domestic animals. Though the analogy is strong between both the health and the sickness of the inferior animals and man, the author admits that it would not be strictly logical to infer that the autocratic power of healing belong to both in an equal degree. Animals are free from the *psychical* element, which has so important an influence in modifying human disease. We may safely infer that there is a *similar* curative power existing in both, but no more.

The second proof is deduced from the medical history of savage and uncivilized nations. It is very true that they often recover from disease; and also that, although instinct may lead them to seek relief in such rude medical art as they can invent, this is rarely of a very perturbative nature, and could not much influence the general result. Their medical resources are either charms, spells, and talismans, or indigenous herbs. Most of the latter must be inert; for if we admitted the curative powers of the plants culled and vaunted by every people, we must include in the pharmacopœia nearly all the vegetable productions of the globe. We object only, that the normal life led by savages renders them less liable to the severer diseases. Among the imperfectly civilized nations of antiquity,

and even among the Greeks and Romans, the treatment of diseases was left mainly to the priests, and the order of physicians has left no traces of its existence in a considerable portion of ancient history. Yet we do not learn that the mortality was very great. "Many, no doubt, died; but many also recovered; just as we witness in modern times." Sailors in vessels too small to carry surgeons, and isolated bodies of men, shipwrecked, or otherwise cut off from medical aid, have been known to survive very severe fevers, under the most unpromising circumstances. Cases treated in every community by the expectant method, afford another proof of the extent of Nature's power to cure disease. Under this head we may class potions and ptisans; vegetable alteratives, as sarsaparilla, — recently proved by experiment to be wholly inert; the grape-cure, the milk-cure, vegetable diet, and sea-voyages. The numerous recoveries under the use of nostrums of the most violent kind, prove the power of Nature, which can overcome the baneful effects both of the disease and of the remedy. The amount of patent medicines swallowed is almost incredible, and can be estimated only by the extent and consequent cost of their advertisements. The two potent drugs, aloes and opium, are the basis of most quack medicines; the former in pills of every name, the latter in the various pulmonic sirups. Yet people consume these in incredible quantities, and survive. Medical literature, ancient and modern, as well as the unwritten testimony of medical men, unwittingly furnishes us with much proof of the autocracy of Nature in curing disease. These records and this experience demonstrate, to any one sufficiently above prejudice to judge them fairly, that many cures, under the most opposite modes of treatment, can be ascribed only to the power of Nature. Still stronger evidence of the same kind is furnished by the different epidemics which, at various times, have scourged the human race. The results, on a large scale, whether in typhus, scarlatina, or cholera, appear unaltered in any appreciable degree by the very various interferences of medical art. Dr. West, a recent and careful observer, says: "In spite of the increase of medical knowledge during the past fifty years, the proportion of small-pox cases that termi-

nate fatally has been estimated by the best authority to be as great now as it was half a century ago." The histories of all pestilences and plagues, from the simple narrative of Thucydides, and Boccacio's "*mortifera pestilenza*," to De Foe's graphic tale of the "Plague in London," and Sue's dramatic episode of the reign of the cholera king at Paris, agree, not only in the main features of their hideous descriptions, but in the sad results of their wide mortality. The Norfolk epidemic spared only a portion of the noble souls who went from the medical ranks, in the hope of carrying efficient aid to the sufferers; and the statistics of the yellow-fever at New Orleans, the past summer, are as startling as in any previous year. If, therefore, we accuse Nature of causing many deaths, we must also give her the credit of those recoveries where medical art has shown itself of no avail.

Another argument for the autocracy of Nature is based on the records of Homœopathy, considered as a system of pure expectancy; but we reserve this for future discussion.

Finally, this historical evidence acquires great additional force and vivacity, if sustained by the personal testimony of living physicians. Such testimony we have already shown, by quotations, to lie ready at hand in the experience of every old practitioner. Though the prejudices of education, the force of conservative habits, and prudential motives may keep much of it concealed, enough has been elicited from the several works we have cited, and in the various correspondence they have aroused, to prove the curability of many diseases by Nature alone.

"The one great result obtained from the study of these various authorities is this,—that the power of Nature to cure diseases is infinitely greater than is generally believed by the great body of medical practitioners, and by the public generally. So great, indeed, is this power, and so universally operative, that it is a simple statement of the facts to say, that of all diseases that are curable and cured, the vast majority are cured by Nature independently of Art; and of the number of diseases that, according to our present mode of viewing things, may be fairly said to be curable by Art, the far larger proportion may be justly set down as cured by Nature and Art conjointly. The number of diseases cured entirely by Art (of course I omit in all these statements *surgical*

art) and in spite of Nature, — in other words, the number of cases that recover, and would have died, had Art not interfered, — is extremely small. We shall see, in the remaining chapters of this work, which treat of the Medical Art, that the statement just made is far from being tantamount to saying that this art is powerless and useless. It will be there shown that the Medical Art has a noble and most beneficial part to play, in its true character of a handmaid and helper of Nature; although it may seem shorn of some of the heroic attributes with which ignorance and early superstition may have falsely decked it." — *Forbes*, pp. 170, 171.

We come now to the second portion of our subject, and the concluding half of Dr. Forbes's volume, which treats of the Nature and Powers of the Medical Art. The five remaining chapters discuss the Existence and Nature, the Instruments, the Mode of Action, Specific and Vicarious, and the Real and True Powers of Medical Art.

The existence of a medical art, even among the rudest nations, is a matter of history. From its foundation in the wants and sufferings of mankind, it was not likely to be neglected. Though we have made infinite progress in new views and remedies, yet the results of our practice, placed side by side with those of Hippocrates, are not so very flattering. And yet the medical art has much to boast of. It is second in importance only to those arts which minister directly to the support and maintenance of human life. All its objects may be classed under two heads: the Prevention of Diseases, and the Mitigation or Cure of Diseases. Although the first, the preventive branch, is infinitely the superior, it has hitherto always happened that the second, the Cure of Disease, has received the most attention, because man is always less solicitous about prospective evils, than about those actually present. If more extended observation shall only lessen the faith in therapeutics, it cannot be doubted that hygiene will be proportionately developed and valued. The advancement of the preventive part of medicine has been one of the objects of our author in writing this volume. Though but little has been done in hygiene, that little has already been productive of immense results. Mr. Buckle asserts that, owing to the increased facilities of intercommunication and transportation, a famine is now next to

impossible in Europe, and that, if hygiene continues to advance, pestilence will soon become impossible also. It is certain, at least, that not only have the severity and extent of epidemics, such as cholera, been checked by public hygienic measures, but also, that, in the localities most advanced in hygiene, the rate of annual mortality has steadily decreased. The author of "Self-Limited Diseases" and "Rational Medicine" also, in various parts of his writings, declares prevention and palliation to be the two most important branches of medicine,—palliation, as well as prevention; since in all diseases it is necessary and useful, and in many is the only resource.

Preventive medicine is either public, when it assumes the management of the life of the community; domestic, when it directs the sanitary department of the household; or personal, when it regulates the habits of the individual. "If the attention of society were once given to these points," says Dr. Forbes, "the saving of life would be such as would not only modify our tables of mortality, but affect the fortunes of nations." Curative medicine, on the other hand, has been over-cultivated and over-esteemed. Our author does not deny that medicine can accomplish some cures. In the *British and Foreign Medical Review*, he says, in answer to attacks on his first article in that journal:—

"It was never contended for by the author of the article, that the treatment of diseases should or could be exclusively left, in all cases, to a hygienic system of management; or that we were not possessed of many drugs of the noblest powers. . . . It would seem hardly less irrational for a physician of any experience to deny the efficacy of such general means as venesection, emetics, and purgatives, or the individual power of such drugs as opium, mercury, iodine, iron, &c., than for the soldier to denounce as useless the very weapons which had enabled him to vanquish."—Vol. XXI. p. 504.

On this point, Dr. Bigelow, in like manner, writes: "Were there no other trophy for the medical profession to boast, it is sufficient to know, that the diseases of small-pox and syphilis alone would have entailed misery and extermination on a large portion of our species, had not medical science discovered the prevention of the one, and the successful management of the other." Of the latter disease, numerous cases are too fresh in

our memory, with their inevitable tendency downward, by regular and almost mathematical laws, and their return to health under the use of what we may call specifics, to leave any doubt of the curative powers of Art.

There is one department of medicine to which the weary practitioner always looks up, in his blind gropings after truth, with hope, confidence, and pride; we mean the noble art of surgery. Here we have something tangible and practical in its remedial results. To secure a bleeding vessel, replace a dislocated limb, adjust a fractured bone, or remove a mortifying extremity or a foreign growth, thereby restoring life, function, and usefulness, is surely an act of which we should be proud. From the ruder apparatus of Hippocrates, and the time when Ambrose Paré taught union by the first intention, to the ingenious mechanism of the artificial limb, and the improved conservative operations of to-day, surgery has constantly advanced. While anæsthesia has robbed it of half its terrors, science has shown it, by excisions and resections, how to save the otherwise crippled member. It is its boast to learn how to avoid mutilating operations, as it should be the glory of medicine to learn to dispense with drugs.

The instruments of the medical art, though they may include almost everything on the globe, and though they have embraced many inert substances, may be conveniently divided into three classes,—Regiminal, Physical, and Pharmaceutical. The first is a very important—we had almost said the most important—division. Though often regarded as belonging rather to preventive medicine, we now know that it produces very powerful curative effects. Among regiminal means are all mental sanative agencies of a sanative character no less than means chiefly external, such as air, temperature, moisture, climate, ventilation, diet, clothing, sleep, exercise, and occupation. The class of physical means is not large, but many of them are very potent. Such are venesection, leeching, and cupping; baths of vapor or water, hot and cold; inhalation of vapors; electricity, hydropathy, and kinesipathy. The pharmaceutical means comprehend all that enormous mass of substances termed drugs or medicaments. They have usurped the place of almost all other

remedies in ordinary medical practice. Popular prejudices demand, and routine continues to administer them, far more than they are needed. Many of them are of very uncertain effect. Among the most positive are evacuants, narcotics, tonics, stimulants, and hæmatics. The lists of astringents, alteratives, and refrigerants contain many valuable articles, though their mode of operation is more uncertain. At the head of this entire class we should place opium, without which Sydenham said he would not practise medicine, and which Oppolzer of Vienna values the highest in his list, at the present time.

In proportion as medical knowledge has advanced, the belief in specific remedies has declined. Formerly, "the name sufficed to indicate the remedy, and the application of the remedy was expected to be followed by the cure of the disease." Some specifics still remain; but their number is small. There are a few diseases directly curable, by the immediate contact of the remedy. Most of these are surgical. Among those that are medical are poisons, curable by antidotes; local irritation, by refrigerants; constipation, by purgatives; parasites, by anthelmintics. Certain local affections can be reached by medicines which have a peculiar tendency to the organs affected. Such tendencies are shown for the kidneys by diuretics, for the heart by digitalis, and for the blood by iron.

Certain diseases remain, which are generally considered curable by specifics, acting in some unknown manner. Yet in these the remedy is uncertain. Such are intermittent fever, curable by quinine and by arsenic; syphilis, by mercury; scurvy, by lemon-juice; periosteal swellings, by the iodide of potassium; hemicrania, by quinine; and some others, which are quite doubtful. There is some reason to hope that the attention which pathologists are now devoting to the minute morbid anatomy of the fluids and tissues may result in the increase of specific remedies, though it must be confessed that chemistry and the microscope have not had any very marked practical effect as yet. Too many diseases are still treated empirically, — that is, upon the basis of *experience*, though this basis is often very unstable. *Pseudo-*

specific is the proper term to be applied to this form of medical practice.

We come now to the other, and the almost universal method of treating disease, that by medicaments having an indirect or vicarious action. Though it cannot be called strictly curative, since the remedies produce the same results in the sick as they would in the healthy body, and can influence diseases only by subserving the provisions inherent in the system for their natural decline, yet this mode of treatment is the main feature and characteristic distinction of the medical art. The *indications* followed in the indirect method may be classed under four heads, as follows: extinguishing treatment, active treatment, pure expectancy, rational expectancy. The author of "Rational Medicine" gives a very similar classification, namely, the artificial method, the expectant method, the homœopathic method, the exclusive method, the rational method. We shall consider them in the order first named.

The indication governing the extinguishing or abortive treatment is to cut short or break up disease. If the views formerly expressed as to the nature and course of diseases be correct, it follows that this method must often fail, and entail needless suffering. Mild and ephemeral maladies do not require it; in severe and self-limited diseases, it will generally be without avail. It is a practice but little followed at the present day.

The really active or *heroic* treatment is also less followed than formerly, but has higher claims to consideration. Though we do not know that bleeding is curative in pneumonia, for instance, yet, judiciously practised in proper cases, it certainly relieves urgent dyspnœa and pain. This method seeks to modify or reduce morbid action, but not to cut short disease. If it does not do good, it does harm; and it is to be adopted by the follower of a rational expectancy only in a modified form.

Pure expectancy, a negative or totally inert treatment, was so named by Stahl, in contradistinction to his own method of rational expectancy. "It being known that most curable diseases are cured by Nature and time, it follows that the chief

scope and intention of the expectation physician is the gaining of time, and to elude the patient from time to time, until Nature hath conquered the disease." In all the times of physic it has been more or less adopted, though seldom met with now, except under other names. Its principles were seldom fully carried out in practice. The real "wait and do nothing" school — *nuda et otiosa* — ordinarily fell into the heresy of some one active remedy.

The practice of homœopathy is the most perfect, as well as the greatest, example of pure expectancy that ever existed in the medical world. For this reason, as well as on account of its present popularity in this country, it deserves a separate consideration. The distinguishing dogmas of this system, as propounded by its founder, were two in number: the asserted law of therapeutics, that medicines have a specific curative effect on those diseases whose symptoms they produce, when taken into the body in health; the asserted discovery in pharmacy, that the medicinal power of drugs increases in proportion to the diminution of the quantity employed. The first is called, for brevity, "like is cured by like," — *similia similibus curantur*; the second, the doctrine of "infinitesimal doses." To the second was added the corollary, that the effects of such doses continued to manifest themselves during periods varying from a few hours to several weeks after their administration, and therefore that medicines should be given singly, and at considerable intervals; to the first was appended the theory, that a large proportion of all diseases, and the majority of chronic diseases, had their origin and cause in *psora*, or itch. A final modification of the second, made by Hahnemann, was that medicines affected the system as powerfully by the nose, as in the stomach; when only smelt of, as when swallowed.

We shall take the liberty of reversing the above order, and of examining first the doctrine of "infinitesimal doses." Ordinary prescribers had always been in the habit of administering drugs in palpable amounts; and though the heroic teaspoonful doses of calomel, said to have been once in use in the Mississippi Valley, had been long abandoned, and chemistry had furnished us with the active principles of many of the

coarser articles of the *Materia Medica*, so that a few grains represented the powers of an ounce, yet the doses of the most potent alkaloids rarely descended below the fifth to the twentieth of a grain,—quantities minute to be sure, but still appreciable by the senses. The founder of the new system at once freed himself from these old trammels of conservatism; he reduced his doses successively from small to smaller, and thence to infinitesimal quantities, so minute as to defy the most delicate tests of the chemist and the most powerful lens of the microscope. We venture to believe that few persons have any just conception of the amazing littleness of the higher, or even moderate attenuations of the homœopath. Statements and comparisons of them are usually regarded as good-natured exaggerations, or wilful falsifications. We therefore subjoin a few of the more striking computations from Dr. Simpson's work on "*Homœopathy and its Tendencies*," with the simple asseveration as to their truth, that they have been verified and vouched for by a high mathematical authority, and that we are not aware that they have been denied by the parties interested in the homœopathic theories. The successive reductions of the drug are called attenuations when conducted in the solid, dilutions when conducted in the fluid state. One grain of any medicine is mixed in a mortar with ninety-nine grains of sugar of milk, or other inert substance. Each grain of the compound, when well mixed, contains one hundredth of a grain of the drug. So far all is plain and reasonable; and this is the *first* attenuation. One grain of this is next mixed with ninety-nine grains of sugar of milk. Each grain of the resulting compound, well mixed, contains one hundredth of one hundredth of a grain, or one ten-thousandth of a grain of the original drug or medicine. This is the *second* attenuation. The *third* attenuation, similarly conducted, gives for each grain of the resulting compound one hundredth of one ten-thousandth, or one millionth of a grain of the original medicine. In the same way, each grain of the *sixth* attenuation contains one billionth of a grain of the original drug. All these are called the lower potencies or preparations. The middle potencies range from the sixth to the thirtieth attenuation; the higher, from the thirtieth

to the two-hundredth attenuation ; and the highest, indefinitely beyond. The thirtieth is as high as we shall care to go. Each grain of the thirtieth attenuation contains one decillionth of a grain of the medicine originally taken, — a quantity expressed by a unit preceded by sixty ciphers, which, out of regard for the printer, we will omit. As Dr. Forbes well remarks : —

“The *hundredth* of a grain is intelligible enough ; the *ten-thousandth* is comprehensible, but begins to waver ; while the *millionth* part of a grain puts our powers of comprehension on the rack. We fancy we grasp the reality, and then it instantly vanishes as a phantom, even beyond the sphere of imagination. Having got so far, the additional subdivisions scarcely add to our difficulties. The mind is occupied by a word more than a thing, and whether the word be a millionth, billionth, or decillionth, the power of comprehension remains the same.”

Such calculations can be best illustrated by comparisons. Were all the products of each preceding attenuation kept and reduced to the *fifteenth* potency, the quantity of sugar required for the reduction of a grain of any drug to this attenuation would be a mass sixty-one times the size of the earth. The proportion of any drug in the *thirtieth* dilution, or *decillionth* globules, is to the sugar contained in the globules as one grain is to sixty-one quintillions of spheres of sugar, each of these spheres being of the dimensions of the earth. The dilutions are equally startling. The *twelfth* dilution represents one grain dissolved in a quantity of fluid six times the size of the Mediterranean Sea. The *thirtieth* dilution consists of a minute globule of sugar, moistened by being simply dipped in a drop out of an ocean of fluid one hundred and forty billion times as large as our whole planetary system, which enormous ocean has been medicated by having dissolved in and mixed through it *one single grain* of the appropriate drug. Yet Hahnemann says that the best dose of all drugs, for chronic or acute diseases, is always the very smallest one in the high dynamization, or *thirtieth* dilution. The homœopathic healing art develops the immaterial (dynamic) virtues of medicinal substances by trituration, or shaking, at each step of the process of attenuation.

“In order to have a determinate rule for the moderate development of power of the fluid medicines, multiplied experience and observation have led me to retain two shakes for every vial, in preference to a greater number, which had previously been used, but which developed the energy in too great a degree.” — *Hahnemann's Organon*, p. 200.

Dr. Forbes, in the British and Foreign Medical Review, calls attention to the circumstance, that each attenuation is effected by means of six triturations of six minutes each, and six scrapings of four minutes each, the whole period of preparation occupying exactly *one hour*. Let us recollect, also, that it is not only drugs usually esteemed potent, but such comparatively inert substances as charcoal and oyster-shell, that are rendered powerfully medicinal by these processes. Such substances occupy a prominent place in the homœopathic pharmacopœia, and we are continually assured that their medicinal effects last from a week to fifty days before a repetition of the remedy is required. Another difficulty consists in the homœopathic theory, that the effect of their preparations is rendered nugatory by the presence of other drugs (meaning thereby many simple substances), while we are all conscious of introducing into our bodies by accident or design, in food, drink, or air, many grains of even the lower attenuations of charcoal, or lime, during every day of our lives.

Although the public is hardly competent to judge of the merits of medical theories without a special training, it is capable of understanding arithmetic; and many common minds will probably agree with a recent homœopathic axiom from Punch, that “Infinitesimal quantities produce infinitesimal effects.” The result of the carrying out of these dilutions has been, that many homœopathic practitioners have openly renounced the doctrine of infinitesimal doses; while we have reason to think, from daily experience, that many more have secretly abandoned them in practice. By whatever arguments his disciples may justify their deflection from one of the laws of Hahnemann, they still adhere to his other dogma, and maintain the truth of the “*Similia similibus curantur*,” or “Like cures like.” This *dictum* then, as the basis of their therapeutics, next offers itself for our notice. We

would merely remark in passing, that as soon as the infinitesimal doses are given up, and a return is made to the old forms of medication, homœopathy passes at once out of the class of purely expectant methods of treatment, and enters the great body of the pseudo-specific, or empirical schools.

We pass now to the consideration of that theory of homœopathy, whence it derived its name, that drugs will cure those maladies whose symptoms they cause in the healthy system. In the first place, we deny that many medicines, said to be capable of exciting artificial diseases in the healthy body, possess that power. We may instance the very medicine with which Hahnemann first experimented. Knowing cinchona to be a specific for fever and ague, he took some while in health, to learn how it acted. He thought it produced symptoms of this disease; but others have failed to observe any such effects. On the other hand, some medicines are capable of curing morbid conditions, which are incapable of exciting any such condition in the healthy body. We need only mention iron, which was never known to cause anæmia, though it certainly cures it. Very different results have been obtained recently by Doctors Böcker and Lehmann, in Germany, who, experimenting on the more correct physiological law, that drugs produce the same effects in the healthy as in the diseased body,—instead of curing in the diseased the effects which they produce in the healthy body,—have proved that water and mercury hasten, and alcohol, coffee, and tea retard, the metamorphosis of tissue.

Secondly, we believe that a large proportion of the experiments performed by Hahnemann and his disciples are altogether fallacious; that the symptoms produced by certain drugs were sequences only, and not consequences; that these symptoms were the effect of an expectant imagination; and that, as many of the later experiments were conducted with infinitesimal doses of the drugs experimented on, we may conclude, from the apostasy of their own followers, and from every law of reason, that in these cases the medicines produced no effects at all. Before we can be called on to admit the recorded phenomena as *consequences* of the medicines, we have a right to call for a parallel series of healthy persons,

set down to record all their sensations for days, after taking *no* medicines. In these experiments it seems to be assumed that every sensation, every action, which occurred subsequently to the medicine's being taken, was *caused* by the medicine. The very number of the symptoms said to be produced suffices to show the absurdity of the conclusions drawn. Thus 1090 symptoms are recorded as the effects of oyster-shells, and 590 as produced by plumbago. The constant overstepping of the limits of one another's lines of symptoms by the several remedies, is sufficiently shown in such works as Jahr's Manual. We can hardly conclude, consistently with our consciousness of periods of happiness and peace of mind, that certain substances, which daily enter and abide in our bodies in minute quantities, can have those peculiar *psychical* effects which are ascribed to them by the homœopathist. Finally, even if we admitted the above-cited assertions as to the effect of infinitesimal doses, it is obvious that it would be impossible for any one man, even in a long life, to have gone through enough *provings* to settle absolutely which particular attenuation was most potent in each disease.

Thirdly, even where positive effects are produced on the healthy body by medicines in sensible doses, these effects bear a very imperfect resemblance to any *one* natural malady, or even to the aggregated symptoms of any malady. Many diseases also are acknowledged to be latent, and the fitting remedy could not be selected for such cases on the principle of "*Similia similibus curantur*."

We are led, by the course of these remarks, to speak of two other objections to homœopathy. One is, that it deals too exclusively in symptoms; the other, that it relies on the very unstable basis of specifics. It attaches too much importance to secondary phenomena as indicative of treatment, and views each symptom separately, or singly, as something to be met by a specific. The rational understanding and treatment of disease can be advanced only by aggregating symptoms into groups and classes, on the one hand, and by searching into the intimate nature and causes of such groups, on the other. Since homœopathy gives remedies, singly and at intervals, to obviate each symptom as it arises, it is clearly open to the

danger of treating very opposite morbid conditions by the same drug, and often improperly. This is the mistake of the rudest empiricism of the earliest ages of physic. A certain attenuation of a certain drug, when swallowed by a person in health, produces headache, or abdominal pain; it is therefore selected as the remedy for those symptoms. Yet headache may be symptomatic of an overloaded stomach, a nervous affection, encephalic inflammation, or simple mental exhaustion. Abdominal pain may indicate flatulence, colic, hernia, or peritonitis. We do not ascribe to the practitioners of this school the fault of any grosser mistakes than may be and have been committed by other physicians. We wish simply to indicate the tendency of such a theory to weaken diagnosis, degrade science, and jeopard the well-being of the patient.

Since it has been shown in the history of medicine for two thousand years, that mankind has been constantly searching for specifics with very little success, we have no reason to suppose that homœopathy, proceeding on a false law of therapeutics, has been any more successful. We have yet to learn that its disciples have firmly established by experience any specific, based on a reasonable theory, like that of fresh vegetable food and organic acids for scurvy, or iron for the impoverished blood of chlorosis.

We think it can be fairly deduced from the preceding pages, that the efficacy of infinitesimal doses is unproved and contrary to reason, as well as often abandoned by the homœopaths themselves; and that the law of "Like cures like" is also entirely baseless and a figment of the imagination. The asserted facts of the long-continued action of a minute quantity of any drug, and of its equal power when smelled of as when swallowed, fall with the doctrine of infinitesimal doses. The theory that many diseases are caused by itch hardly needs refutation, since the cause of that disease has been traced to a microscopic insect in the skin, and the cure of it has been also discovered in such unctuous substances as will clog up the creature's *trachea* and stop its breath.

All this refutation of the theories of homœopathy is of very little account, however, if *facts* can be brought to sustain them. The advocates of homœopathy, while admitting the

novelty and seeming improbability of their theories, profess to repose their confidence and belief only on real experience and practical results. It is like the rallying-cry of the Spiritualists, — “ We know what we do see ; come and see for yourselves ! ”

We must next answer, then, these two inquiries : Has homœopathy absolute power to cure diseases ? How great is that power relatively to that of *allopathy*, — a name which has been improperly applied to the old school of medicine, and is not recognized by regular physicians ? No evidence exists as to the absolute power of homœopathy to cure diseases. The only way to prove the existence of such a power would be by an experiment on a grand scale, of two sets of parallel cases of disease, the one treated homœopathically, the other treated *apparently* in the same manner, but with fictitious globules in lieu of the real globules of homœopathy, — thus placing the patients under the same influences of regimen and faith. Such partial experiments as have been made, in hospitals and private practice, as far as they went, were unfavorable to homœopathy. The most extensive experiment was one instituted among a large number of children by the Prussian government, to determine the powers of belladonna as a prophylactic from scarlet-fever. This power had been much insisted on by homœopathists ; but the result showed it to be of no avail.

With regard to the second question, the argument of the homœopathist has been based on the results of their mode of treatment in the Hospital of the Sisters of Charity in Vienna, opened in 1832, and given to the professional charge of Dr. Fleischmann, a homœopathic physician, in 1835. We have before us the reports of that institution, giving a tabular view of the cases treated during eight years, — in all, 6,551 patients ; and also a statement by a regular physician, Dr. Balfour, who visited its wards daily for near five months, and who assures us that he has tried to preserve a conscientious impartiality. The latter gentleman says, that the situation, arrangement, and ventilation of the hospital, the freedom from the frequent visits of medical classes, the religious sympathy with the sick, — the nurses being spiritual comfort-

ers and the patients Roman Catholics, — as well as the youth of the latter, one half being under twenty-five years of age, were all conducive to their recovery; while the fact of the admission and discharge, the diagnosis and report on all cases, being under the absolute control of one man, gave opportunity for the influence of such unconscious partiality as a specialist would be liable to feel in establishing the results of his theory. Cold water externally, and clysters, were used; the diagnosis was rarely written on the card at the head of the bed, unless in marked cases, and the previous history of the patients it was difficult to obtain. The other hospitals of the city report having received from this several unrelieved cases of effusion in the pleural cavity, which recovered under the use of purgatives and other active means.

We regret being unable, from want of space, to go into an examination of these tables at length. We must avail ourselves of a brief *résumé* of their results. We find, first of all, that the mortality of severe, incurable diseases was unchanged; we mean of such cases as are usually called hopeless. All the cases of abscess of the brain, all the cases of cancer, and all of phthisis, are registered “died,” or “dismissed uncured”; and of 819 cases of typhus, there are 140 deaths. The number of cures is set down at 5,980, and the mortality at 6.4 per cent. This is claimed as a triumph over the old method. The average mortality of the largest London hospitals is 8.4 per cent.; but of thirty provincial hospitals, 4.4 per cent.; and of military hospitals, 2 per cent. But we must compare the character of the diseases treated in each. It has been found, by wide statistics, that the percentage of hospital mortality depends upon the number of cases with the following diseases: pulmonary consumption, organic disease of the heart, kidneys, or stomach, and aneurisms of the great vessels. Comparing Fleischmann’s 6,000 cases with 6,000 in the Edinburgh hospital, we find, of these five diseases, 120 cases in the former, against 548 in the latter; and of mild diseases, at Vienna, 301 cases of sore throat, at Edinburgh, 34; 110 cases of chicken-pox at the one, 2 at the other; 61 cases of headache at the former, against 37 at the latter; 52 cases of influenza at Vienna, and none at Edinburgh; at the former, 52 cases

of injuries, at the latter, 641 cases, of which 150 were capital operations. Cases admitted moribund were registered at Edinburgh, but not counted at Vienna. It hardly need be computed what the difference would be between a regular and a homœopathic hospital, with exactly the same diseases in their wards, when the mortality varies so little from the average of the former under circumstances so very favorable to the latter. Still the fact remains, that many mild, and some severe diseases, recovered perfectly, though not so quickly, under homœopathic treatment. As we have found the infinitesimal system of medication nugatory, and as it was adhered to in these instances, we are driven to the conclusion that the cures were due to regimen and to some third power. That power must have been Nature. As a system of pure expectancy, then, homœopathy furnishes us with one of the largest proofs and strongest arguments for the extensive autocracy of Nature in the cure of disease.

Since "Expectation" is as old as Hippocrates, the assertion that homœopathy had a direct and original influence in modifying the heroic practice of the older school of medicine cannot be fully sustained. The theories of Broussais had some influence on the practice of this country, and they were broached before those of Hahnemann. Common sense and observation had been gradually modifying the treatment to meet the changed and feebler type of American diseases; and the medication of the Northeastern States is, and has long been, less heroic than that of England. Homœopathy has been successively modified by tacitly resigning the psoric origin of disease, and the high attenuations; giving medicines often, and in quick succession, or even alternating them at brief intervals; and using aperients, leeches, and baths. There remains only the baseless law of therapeutics, "*Similia similibus curantur*"; and thus the original system of Hahnemann has ended in the practice of unproved specific (pseudo-specific) medicine. Last year, at Paris, Doctors Latour and Gallard, editor of and contributor to *L'Union Médicale*, were sued for damages, laid at 50,000 francs, by twenty homœopathic physicians, for libel, in calling them "ignoramus, juggler, and charlatan." The *Tribunal de la Seine* gave judgment for the defendants. M.

Andral, son of the *savant*, counsel for the defence, said that the doctrine of *Similia similibus*, etc. had been declared false by all the scientific bodies of Europe, and all but one in America (the Pennsylvania Homœopathic College); when it had been tested before regular physicians, it had always failed; and he exhibited prescriptions of one of the *plaintiffs*, Dr. Love, which consisted of large doses of allopathic remedies. He closed with the noble saying of Pascal: "If it is wicked to have no respect for truth, it is just as wicked to have no contempt for falsehood."

We have now reached the last method of employing the indirect or vicarious action of medicine in the treatment of disease, which is called the auxiliary or mild treatment,—Rational Expectancy. Disregarding the extinguishing mode as obsolete, and the specific, as being as yet inapplicable to most maladies, this method seeks to follow the just and middle course between active and purely expectant treatment. This form of practice, though based on the two great facts of the great power of Nature to cure acute diseases, and the comparatively small power of Art, is far from ignoring the existence or value of the medical art. It aims only at aiding Nature, or where it cannot aid, is careful not to thwart her. Dr. Forbes regards it as the most philosophical, the safest, the surest, and the most successful of all modes of practice. He defines its indications as follows:—

"1st. To place the diseased body in the most favorable circumstances for the development and exercise of its own conservative powers, by the institution of a proper regimen, in the most comprehensive sense of that term. 2d. To endeavor thereby, or through the use of medicaments, to remove such obstacles to the favorable action of the conservative and restorative powers, as may be removable without the risk of checking or injuriously perverting them. 3d. Not to attempt, by any vigorous measures, to alter the course of the morbid processes so long as they seem to keep within the limit of safety, and when they transgress or threaten to transgress this limit, only then to endeavor to modify them by such mild measures as, if they fail in doing good, cannot do much harm. 4th. To be on the watch against possible contingencies, which may demand the employment of measures of exceptional activity, whether in the form of regimen or medicine; and, when required, to apply such measures with the necessary vigor. This last

indication refers to such contingencies as great irritation or pain, exhaustion, sleeplessness, diarrhœa, which often admit of great mitigation by drugs, dietetic stimulants, &c." — pp. 239, 240.

In a similar way, Dr. Bigelow defines his idea of the true position and practice of the medical art; while deprecating heroic treatment, yet advocating the necessity of moderate means of interference.

"The man must be somewhat of a stoic who can look upon a case of severe colic, or of the multiform distresses which result from over-tasked organs of digestion, and quiet his conscience with administering inappreciable globules, instead of remedies. . . . It is the part of rational medicine to alleviate the sufferings of the sick. And for this end alone, were there no other, physicians would be necessary as a profession. . . . The power of the medical art to palliate diseases is shown in a multitude of ways, — active, cautious, and expectant. The pain of acute pleurisy is relieved by venesection; that of pleurodynia, by anodynes and external applications. The pain of acute rheumatism is postponed by opium; that of gout, by colchicum. Synovitis is favorably affected by rest; chronic rheumatism more frequently by exercise. . . . Cathartics, laxatives, emetics, leeches, counter-irritants, cupping, hot and cold applications, etc. are of benefit in various local and general maladies. Yet these remedies, especially the more energetic of them, are often employed when not necessary." — *Expositions of Rational Medicine*, pp. 43, 52, 53.

Rational Expectancy, says Sir John Forbes, "occupies the happy medium between doing too little and doing too much. Without seeking to encumber Nature with help, where help is not needed, it proffers aid in all cases where it is required and can be applied; and though the aid may not be great, it is positive, and weakened by no counteracting force. The other physiological modes of treatment, on the other hand, if they sometimes do more good, also often do more harm; and on attempting to estimate their positive value generally, it is not easy to say on which side the balance lies." — p. 243.

The concluding chapter of his volume gives a General Estimate of the Powers of the Medical Art. Sydenham, who may be justly ranked with Hippocrates and Hunter, as one of the three greatest practical healers, disgusted with its quarrels and conflicting theories, stigmatized medicine as "*Ars garrulandi potius quam sanandi.*" The illustrious Boerhaave ordered all his library to be burned after his death, save one volume, entitled

“The Whole Art of Healing.” When this was eagerly opened by his pupils, it was found a perfect blank, with the exception of the following short sentence written on the fly-leaf: “Head cool, feet warm, and bowels open, will make doctors poor.” Celsus had a keen appreciation of the short-comings of the medical art when he said of it, with Latin brevity, “*Sanitatem ægris promittit.*” Its failures to redeem its promises have been subjects of jest and satire ever since. At first esteemed a divine art, clothed with some unknown mysterious power to strangle disease, we have seen it gradually despoiled of many of its positive attributes. Since diseases have been found to be no longer distinct entities,—enemies because foreigners,—but to have a natural progress and laws of their own,—to be, many of them, self-limited,—to terminate, in acute cases, almost as spontaneously in health as in death, though when tending in the fatal path to be frequently incurable,—the medical art has proportionately declined in arrogance, and been reduced from its false assumptions as a controller, to its more humble, but true position, as a handmaid and helper of Nature. Dr. James Jackson long since drew attention to the proper definition of the word *cure*, by comparing it with its Latin origin,—saying, that it does not mean to cure, but to take care of,—that is, it implies the safe-conduct of the sick. As the good curate watches his flock, and guides them aright, so should the physician strive only to guide and conduct the diseases of his patient.

“In the vast majority of diseases the medical art can, in strict language, even when exerting its powers most successfully, hardly be said to *cure* diseases at all. All that it [now] professes to do, and all that it does, is to influence diseases in an indirect and partial or imperfect manner, by modifying, to a greater or less extent, the functions of certain organs, with the view and in the hope of thus modifying the processes in which the malady consists; that is to say, modifying them in such wise as to render them less dangerous to the integrity of the animal system, and more controllable by its inherent conservative and reparative processes.” — *Forbes*, p. 256.

A young physician once asked the late Dr. Twitchell of Keene, who by his practical good sense had acquired a wide reputation, what his principles of practice were, expecting to

hear some very profound remarks on the subject. But the sagacious old man replied, "My principles are very simple. If the patient is hot, I cool him; if he is cold, I warm him; if there is pain or restlessness, I relieve it; if there are irritating matters, I evacuate them; if any secretion is scanty, I try to make it free. These are some of my most important principles."

But with all these drawbacks, Dr. Forbes justly says,—

"According to the lowest estimate that can be properly formed of the Medical Art, it must still hold its pre-eminence as one of the greatest boons that human intellect has ever elaborated for the benefit of man's estate. With all its feebleness and all its uncertainties, it possesses, and ever must possess, a sufficiency of solid truth and solid power to make it worthy of the study of the noblest intellects and the tenderest hearts."—pp. 261, 262.

We cannot take leave of Sir John Forbes, without calling attention to the vast number of commendatory correspondents whom his first article on these subjects, in 1846, called into the field. We fancy we recognize the hand of the Nestor of our profession here, in one of the earliest letters; the author of "Rational Medicine" heartily commends his views to the American public, and he is ably seconded in a long article by Andrew Combe, on the "Observation of Nature in the Treatment of Disease."

We should hardly be doing justice to a very able writer in bringing this long article to a close without some further notice of Dr. Hooker's Prize Essay on "Rational Therapeutics." Our space will limit us to a few of his general laws. Chomel first promulgated the Golden Rule of therapeutics, when he uttered the maxim, "Do good, or, at least, no harm." Our author adds three other laws. The first—in opposition to the old maxim, *Melius anceps remedium quam nullum*—is, that "no active medicine should be used in any case, unless the evidence is clear that it will effect good." The second is, that "the practice in each case should be based mostly upon what we *know* of the *modus operandi* of remedies." The third inculcates that "we should be governed in our treatment of disease by the actual effects which we see our remedies produce."

The autocracy of Nature — that long-sought *tertium quid* in therapeutics — having been at last found, it only remains for us to notice briefly, in conclusion, the means for improvement, the grounds for hope, and the sources of danger for the practitioner; and to indicate the true position and path of progress for medical art.

Though we may agree with the author of "Letters to a Young Physician," that "no one man knows all that is known about medicine," yet the young man will find quite as much, in the recorded evidence of his predecessors, to mislead, as to guide him rightly. "The practitioner must possess, first, sufficient knowledge to diagnosticate the disease; and, secondly, sufficient sense, as well as knowledge, to make up a correct judgment on the course to be pursued." These two requisites, then, the cultivation of the powers of observation and the possession of common sense, are the way of progress for the physician. Other means of improvement, as well as grounds for hope, lie open through the three following paths: first, the careful and extended study of the natural history of disease; secondly, the systematic proving of drugs experimentally, on the physiological law, that the effects of drugs in disease can be judged by their effects in health; thirdly, the study of physiology and pathology, including all the aids which chemistry and the microscope can furnish.

The sources of danger and error are numerous. Most common of all is loose reasoning, such as fills the tomes of Hahnemann and Jahr, as well as many writings of the older schools. We mean the mistaking of sequences for consequences: *post hoc, ergo propter hoc!* "that everlasting stumbling-block of common minds." Although Dr. Hooker well remarks that we need "minute, recorded, impartial observation," yet the numerical method is open to fallacies. Says Dr. Laycock, in the British and Foreign Medical Review: "The result of my experience in vital statistics is, that the numerical method is one not as yet *generally* applicable to medical observations; or, if generally applicable, only in simple points of detail. I consider it a truly scientific method; but, knowing the difficulty of minute diagnosis, I think a corps of trained observers is needed, — trained in the same

school,—so that they may observe alike ; then their observations, whether right or wrong, will be alike right and wrong.” Dr. Bigelow in like manner writes: “The numerical method so advantageously applied by Louis to determine approximately the pathological character of diseases, cannot be well applied to the more complex subject of medical treatment. It is worthy of notice, that questions of relief are more promptly settled than questions of duration and safety. Bleeding will relieve the breathing in pleurisy, but the length and safety of the disease, under such treatment, is not yet determined.”

Specialists, also, are particularly prone to error. The advantages to medical knowledge of so many minute observers, each investigating a single subject, is more than counterbalanced by their unconscious tendency to distort facts to suit their theories. Besides these errors in reasoning, there are graver ones in practice. Among them is the following out new scientific theories too far, to the exclusion of empirical methods justified by experience. The truly sensible practitioner will seek to reconcile correct diagnosis and successful treatment with the most advanced views of modern physiology and pathology.

“Without a rational basis, the physician is only a bungler ; and without a thorough knowledge of the empirical part of science, he deprives himself of many useful weapons for combating disease. The wise physician will always try to adopt for his practice methods which are at once scientific and successful, basing all his treatment upon the sound foundation of rational medicine ; he will ever eagerly hail all that is *true*, even though it may wear the dress of novelty ; but, at the same time, he will never lose sight of the ‘good old paths,’ or forget that practical knowledge which has been gained by the accumulated experience of the wise and good men of the past.”—*Edinburgh Med. Journal*, September, 1858.

A vast amount of this practical knowledge is scattered among the older country practitioners. There is danger, also, lest the walker of hospitals lose sight of the man in the patient, and, in his ardor for science, forget the sacredness of human suffering and of human life.

The true office of medical art, as the humble helper of Nature, is, as expressed by Dr. Bigelow, in the few curable

diseases, to use active or specific treatment; in the many self-limited diseases, to follow an expectant plan; and in the many incurable diseases, to content itself with palliation.

“Very dignified is the stand sometimes taken by the discriminating physician, when, after a careful survey of all the circumstances of a case, he comes to the conclusion that the patient will have a better chance for recovery if he for the most part be let alone, than if his case be actively treated. The disease may be violent in its character, seeming to the common observer to call for the most active interference of Art, and the importunities of the friends of the patient for such an interference may be exceedingly urgent; and yet he remains firm to his purpose, using only such palliatives as may assist Nature in weathering the storm. It is truly a ‘masterly inactivity,’ of which a frivolous and indiscriminating mind is wholly incapable.” — *Dr. Hooker’s Prize Essay.*

The path of progress for the medical art is so well indicated at the conclusion of the above article, that we are unwilling to add anything more.

“If the principles I have developed in this Essay be correct, the field of investigation offered by therapeutics is a more inviting one than has commonly been supposed. The achievements that may be realized here may even vie with those brilliant results which have of late attended researches in diagnosis and pathological anatomy. Our Art, it is true, will never cease to be a conjectural one; but it may be redeemed from the unnecessary confusion and uncertainty which false principles of observation have brought upon it, and be made vastly more definite in its aims than it is at present. To attain this, severe and patient labor will be required. . . . This is the great work which is now demanded of the profession. : . . . To such a work as this, the eminently practical character of the American mind is particularly suited. The French excel us in the researches of pathological anatomy, and perhaps in diagnosis; the English surpass us in the literature of medicine; but in therapeutics we are superior to both, especially to the French. In the grand movement which I have described as going on in practical medicine, the American school has been thus far in the advance, whether we regard the general movement itself, or the particular improvements which have contributed to it. Let us, then, enter heartily upon this work, and do what we can to rid our Art of its encumbrances and defects, and introduce fully the reign of a truly RATIONAL THERAPEUTICS.”